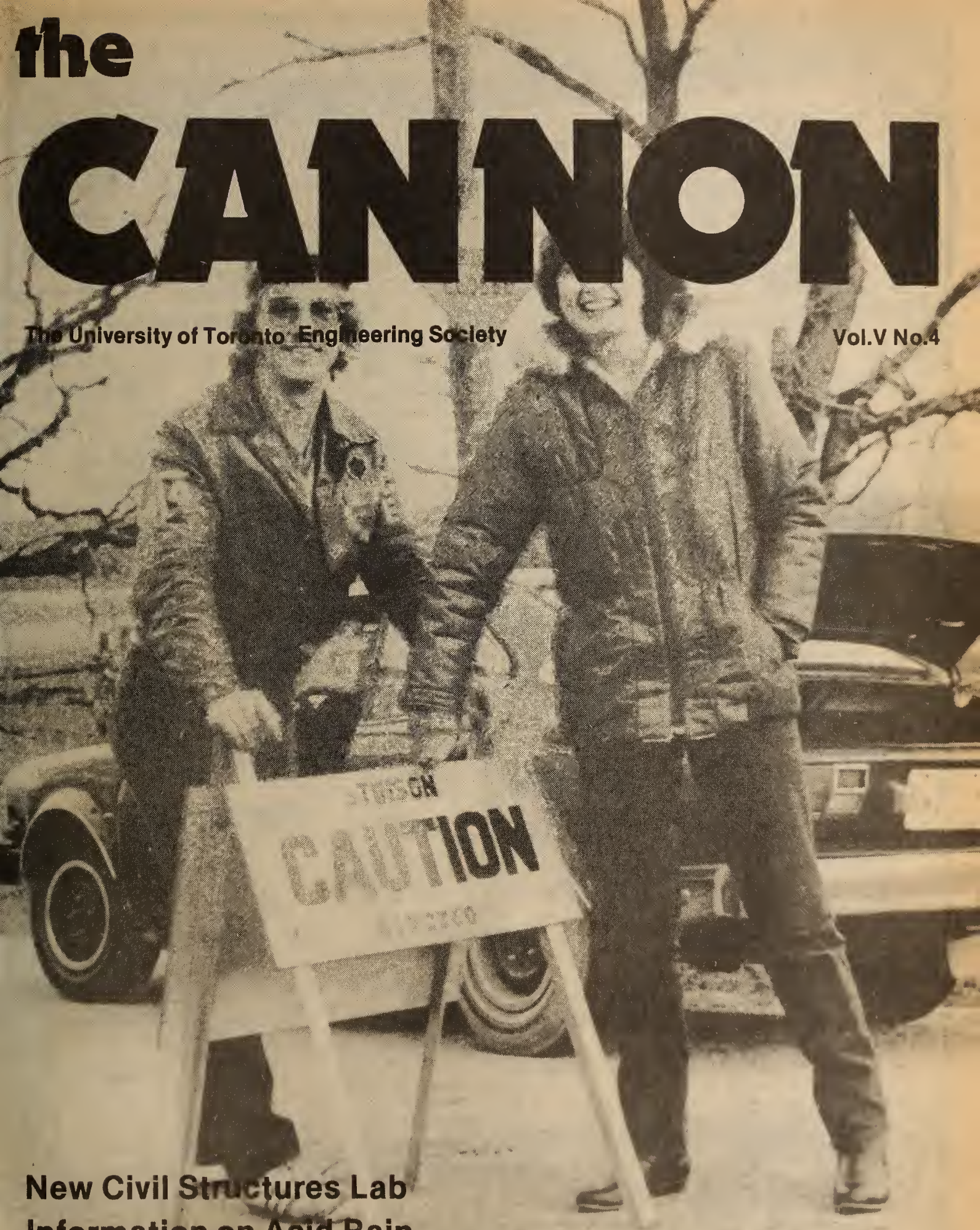
the CANNON

The University of Toronto Engineering Society

Vol.V No.4



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Information on Acid Rain
Faculty Members Honoured

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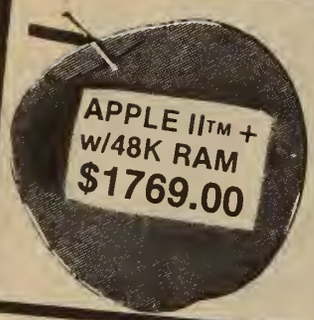

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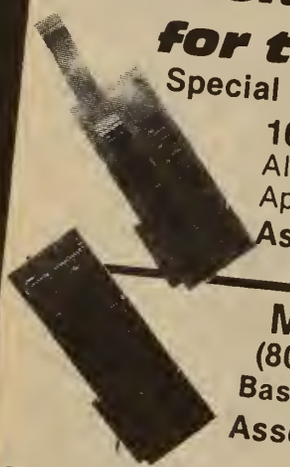

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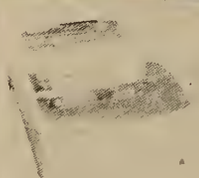

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the CANNON

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THE CANNON is a publication of the University of Toronto Engineering Society. It is published monthly to announce Eng. Soc. events, discuss Faculty and University matters, and present technical information of interest to Engineering undergraduates. Subscriptions are available, call Ella at 978-2917. Anyone interested in helping with THE CANNON is most welcome.

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New Structures Laboratory
The Sanford Fleming building is host to a new structures testing laboratory for the civil engineering department.
page 5

APSC Staff Honoured
The last Faculty Council meeting was a gala event with past speakers, Mr. James Gow and Professor Emeritus L.E.Jones were paid tribute for their work in the faculty.
page 7

Report on Acid Rain
This past summer students were sponsored by Canadian and American environmentalists to travel throughout both countries informing people about the acid rain facts.
page 12

Telethon Brings in Bucks
Fourth year students called alumni from their disciplines in an attempt to get contributions from these Skule graduates. The event was a success!
page 10

On the Cover
Car Rally Antics

In Every Issue

Calendar	page 8
President's Message	page 11
Eng. Soc. News	page 10
Engineering Athletics	page 14

Editor's Notes

In this time of budget cuts and serious funding limitations within this University, and specifically the Faculty of Applied Science and Engineering, there remains one excellent avenue from which to obtain those essential dollars. In any crisis this road to self-sustenance is paved by our own initiative. It is a credit to our faculty that we have done just this. Last year the student body voted in overwhelming support of paying an additional $100 incidental fee which would be put directly into the departments' hands, in order to improve academic conditions. Students must remember that to enjoy a quality education they must do more than pay an extra $100. It is important that the academic staff receive feedback from us on the distribution of our money. January is the review month of the new incidental fee and for this reason I urge you to speak to your class representatives, or chairman of your department, and find out where your money has gone. If you have any reactions, positive or negative, to what has been done, voice them to these same people. It is only by acting in this way, as a concerned and responsible student, that the benefits of this money will be maximized.

Last month an enthusiastic group of fourth year students participated in a telethon organized by the Alumni Association, in which they phoned alumni asking for donations to the faculty. It was impressed upon the alumni that U. of T. has one of the best engineering schools in North America and that money is necessary if it is to continue providing an education of this calibre. They were also told that all the students have paid an extra $100 to help rectify the situation. This in itself did much to persuade the alumni that the lack of funding is serious and that we need their support. Again, through our own initiative, we have managed to raise a substantial sum which will be fed directly into the faculty. In this issue of the CANNON the Assistant to the Dean of Alumni Liason, Malcolm McGrath, reports on the telethon excitement.

The new structures laboratory, which can be seen from the first floor of the Sanford Fleming building, is a prime example of the excellent facilities which result from proper funding. Joe Singer, a fourth year civil engineering student, discusses the capabilities and benefits of this new addition to the Civil Department.

Oops - I almost forgot - Good luck on your exams.

TIRED OF SHEEP JOKES?

Really? So are we, so we're going on to abuse aardvarks, menhirs and Erik Estrada. Our next parody will be *TIGER BEAT*, the 16-year-old-girls' wonder magazine, filled with teenage idles (sic) of the opposite sex, i.e. boys, EngSci's abusing their calculators, etc. Come out to the *TOIKE OIKE* make-up, Thursday Jan. 6, 1983 (first week of Skule) at 5:00 pm in B670 of the Sandford Fleming Building. Bring your friends, family and *you know...*

P.S. Why is watermelon spelled with a 'w'?
P.P.S. You have the Editors's 'sexist, racing and phomohobic' permission to work on material over the holidays with your friends (if you have any, you Zomboids).
P.P.P.S. Last day for submitting material is Jan. 25, 1983 in the *Toike* mail box room SF B670.

Do You consider Yourself a Genius? No? Good! Why not come out to the next

T*iKE *iKE Makeup!

Civil Dept. Gets New Lab

Testing Structures

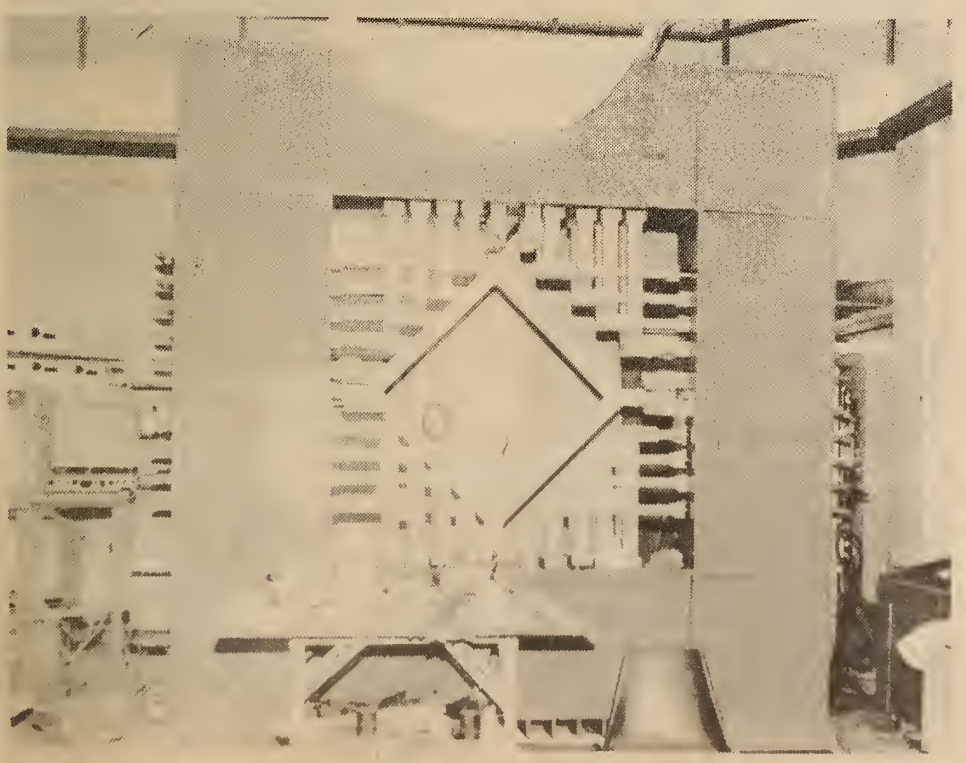
Joe Singer
Civil 8T3

We, at the University of Toronto, have been fortunate to obtain a new structural engineering laboratory. It is located in the northeast wing of the new Sanford Fleming Building. The components in this laboratory will help us understand the inter-relationship of the various elements of which our modern buildings, bridges and other structures are composed.

The principal distinguishing feature of a structure is that they are typically "one-of-a-kind" design. A civil engineering structure is designed and then constructed without any intermediate steps. In designing these structures the engineer follows the recommendations of design codes. These codes contain the results of previous research and past experiences. The engineer relies on the integrity of the design codes in order to produce a safe building.

The research which will be done in the new structures laboratory will be a major factor contributing to the codes and through them to the structures of the future.

A large percentage of the research done on structures is performed in the universities. The construction industry is organized in such a way that no individual firm or segment of the industry would finance the necessary large scale structural work which will be performed in the new laboratory. The behaviour of actual structures is critically affected by the construction details used, e.g., exactly where are the reinforcing bars placed and how are they anchored? The new laboratory will be able to answer many questions concerning the behaviour of structures. The research which will be undertaken will result in direct benefits to society within an exceptionally short time period.



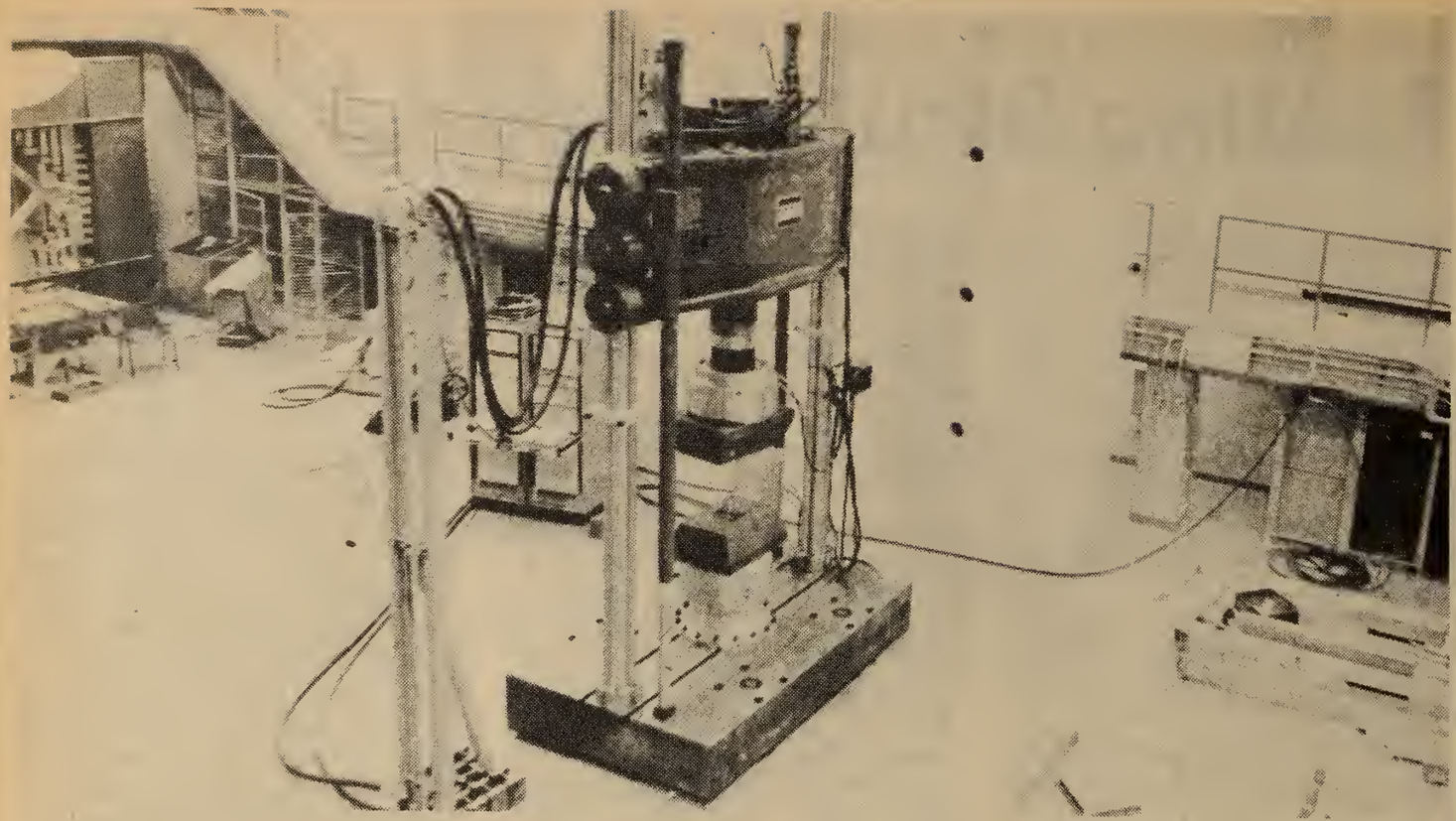
3000 kilo-Newton Loader in Structures Lab

The new structural engineering laboratory will perform many functions. The new equipment includes a three thousand kilo-Newton loader,an eighteen by twelve metre strong floor consisting of a 1.2 metre deep base of concrete along with twelve tons of steel, and a five metre high by five metre wide concrete reaction wall.

The principal component of the laboratory is the MTS universal testing machine. It is capable of supplying large loads to the structures.It has a four and a half metre vertical clearance, a 2.4 metre horizontal clearance, and a two column load frame. It was adapted for the use of this laboratory.

The strong floor will allow many different arrangements of structures to be set up on it. The floor is provided with connections to which meccano-sets may be attached. The floor was designed keeping in mind that during a test the observations (say the deflections of a beam), should not include the properties of the supporting medium. The huge amount of concrete and steel makes the floor very rigid and its movements, even during intervals of high loads, may be neglected. The floor is of the self-contained type, i.e. any loads imposed on it during a test will be cancelled by the reactions of the supporting medium, much like attempting to pull a rug while one is standing on it.

The five by five metre reaction wall was designed with the same principles as stated above. The wall allows hydraulic jacks to be placed in a horizontal plane in order to Induce lateral loads on the specimen. This arrangement



MTS Universal Testing Machine

will allow three dimensional tests on the structural elements.

The most technologically advanced component of the laboratory is the new PDP-2' DEC system computer. It ties together all of the above mentioned components and makes them work as a unit. The computer contains an analogue control system which compares the measured response, e.g. beam displacement, with the desired response as represented by the function generator. Gauges will be placed on the specimen which will relay information into the computer. Adjustments are then made by the computer using the servovalve which controls the flow of hydraulic oil into the testing machines. The computer has the following forms of controls in the test; load, displacement, strain or pressure. The interactive flow which occurs during the test will allow further study into the unloading characteristics of a structure.

All the above mentioned equipment will work in conjuction with the laboratory in the Galbraith Building. This laboratory will be used for the two-dimensional loading case, while the new laboratory will be used for the more advanced three-dimensional research work.

The new facilities will be able to test structures in many new and different ways. Seismic loading on the structure will be introduced with the reaction wall. The closed loop capacity of the machine will allow earthquake simulation to occur. The properties and interaction of steel and concrete will be studied in order to determine their strength during intervals of high strain due to shock loading. The resisting elements of the structures will be subjected to a realistic time history of imposed deformations which would occur during the response of the building to an actual seismic excitation. (Professor Uzumeri)

Experiments will be carried out with respect to the effect of multiaxial stress states on fatigue crack growth of various engineering structures. This type of research is crucial in the offshore structures which are continuously loaded with wave action. The fatigue failure of the large scale welded and bolted connections will be tested. (Professors Birkemoe, Packer)

The new equipment will be able to produce reverse cyclic loading under combined torsion, bending and shear. This fundamental research will be aimed at further development of a general theoretical model for reinforced concrete behaviour. Results of the experimental work will be used in developing analytical models for prestressed concrete structures as well. (Professor M.P. Collins)

The Mechanical Engineering Department is also concerned with various aspects of fatigue failure and fracture mechanics based modelling of fatigue and crack growth. (Professor Hoeppner)

The potential of our new structures facilities is immense. The equipment in combination with our fine structural department will produce many contributions which will advance our knowledge in the behaviour of structures.

Staff Honoured

Special to
the CANNON

At the close of the Faculty Council meeting of Oct. 26, 1982, the retiring Speaker, Professor Olev. Trass, transferred his authority to the incoming Speaker, Professor G.B. Craig, who then presided over a series of presentations.

In 1972, there came into operation a major revision of the Faculty's constitutional and legislative structure. Procedures were greatly enhanced in scope and efficiency, membership categories were substantially broadened and the presiding officer was changed from the Dean to the annually elected Speaker. As a ceremonial conclusion to this first decade of new constitutional operation,

Faculty Council Speakers(from left to right): F.C.Hooper(1972-76), R.W.P.Anderson')1976-78),O.Trass(1978-82),G.B.Craig(1982-)

Dean Slemon (left) presents Mr.J.Gow with Certificate of Appreciation

Speaker Craig made a presentation, on behalf of the Faculty and the University, to each of his predecessors: Professor F.C. Hooper (1972-76), Professor R.W.P. Anderson (1976-78) and Professor Olev Trass (1978-82) — a handsomely inscribed Certificate of Appreciation embossed with the University's seal and signed by Dean Gordon Slemon and President James Ham. Dr. Craig summarized the career and accomplishments of each recipient and each responded briefly.

◆

PROFESSOR JONES 'UN-RETIRES'

◆

The Dean then intervened to give an un-retirement Certificate of Appreciation to Professor Emeritus L.E. Jones who, despite his more than 50 years

continued on page 13

DECEMBER

Sunday	Monday	Tuesday	Wed
			1
5	6 *(Wait - wasn't it September last week?)*	7 *Last Day of Classes*	8 *Study Day (Direct Caffe Injection)*
12	13	14	15
19 *One minute silence for Santa's overworked elves*	20	21	22 *Last Day of Exams (Direct Alcoh Injection)*
26	27	28	29

day	Thursday	Friday	Saturday
	2	**3** *Pub*	**4**
	9 *First Day of Exams*	**10**	**11**
	16	**17**	**18**
PARTY!!	**23**	**24** *Christmas Eve*	**25** *Christmas Day (Reindeer Rest)*
	30	**31** *New Year's Eve* *This is it 4th years - 813!*	

Eng. Soc. News

For those of you who may have missed it (so why talk about it now?) Friday November 5 was the last day to drop a fall term course without penalty. That's depressing. On to more cheery stuff.

The Phantom Sandford Fleming Pub has finally occurred. The first one took place Friday November 19th and while our trustworthy BFC had no problem keeping things under control, the people there had a good beer and good conversation with their friends. (Complaining about those labs?)

The Car Rally was held on Saturday November 13 with a rather confused start. Winners were Mark Franklin and Joe LeFeet (MOON HANGERS) and tied for second were Andrew McColl and Jean Hutchinson and Mike Brownlie with Peter Ewens. Honourable mention goes to Dave Wilson, Alla Linetsky and Joe Chiang who were not quite last.

If you go to the Cawthra Road exit on the Q.E.W., you will see the editor and the E.A.A. President still waiting for someone to give them the instructions!

◆

LGMB ON TV

◆

The infamous Lady Godiva Memorial Band blew their horns in the Grey Cup Parade on Parade on Saturday, November 27. They made it on national television! The LGMB has been faithfully making road trips to all the semi-final Blues football games to cheer on the team. Unfortunately, the Blues didn't make it to the College Bowl (Vanier Cup) but the LGMB were good sports and cheered for the British Columbia T-Birds!

The "Last Bash before the Crash" on Saturday November 27 was a good pub. All those in need of a last fling before exams, let go and had a FANTASTIC time! Engineering pubs are notorious for being successful.

The Cafeteria has finally opened in the Sandford Fleming Building and it looks like an efficient operation. Their soups are homemade every day, as well as their daily specials and one of the highlights is the salad bar. The food is hearty and healthy AND a reasonable price. Good work!

The staff of *The Cannon* has pulled out their good luck charms and sends everyone happy holiday wishes! Cheers!

See you in the New Year

Telethons Are Fun

Malcolm McGrath

The Engineering Students who didn't get involved in our recent telethon missed a great evening.

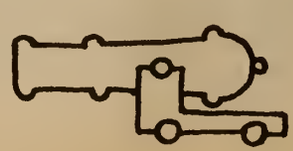
Imagine getting together with a group of your favourite classmates at 5:30 p.m. to partake of free beer (in unlimited supply), fresh cold cuts (ham, pastraml and liverwurst), dill pickles (ice cold), bread (white, brown and rye - fresh from the baker's oven), various cheeses (with crackers), sweets, and finally freshly brewed hot coffee (with cream, not coffee mate). All of this feast served by a bevy of beautiful secretaries in the plush Private Funding Office on Spadina at College.

Promptly at 6:30, handsome, dynamic Rob Howard steps to the platform and, in his own smooth way, tells you how to make "the pitch". Rob combines wit with wisdom and leaves you rolling in the aisles - but feeling better because of it - and certainly "rarin' to go" on the first phone call.

Suddenly, the room is quiet. Who will do it first? Almost imperceptibly, our leader Wayne picks up the receiver, deftly dials his first number and waits for the party to answer. The whole room is rivetted on Wayne as he sits with an air of quiet confidence - what a guy! Now he is heard to say "Hello, Alumno - or, I mean - rather - aw nuts" and hangs up.

Fortunately, most of the crew were luckier than Wayne, so that the 65 people who were involved managed to get pledges for nearly $17 000 for the faculty. Thanks to all for a great effort.

Those of you who missed the fun will get another kick at the gong next year!



President's Message

Things at our Engineering Society are running well. Andrew Alberti, our treasurer is doing a super job maintaining the books. Vince Volpe, V.P. Administration is administrating well and Debbie Fletcher, Secretary is working hard despite her recent illness. Peter Weick, V.P. Activities has been very active. Most recently, he has set up our Friday Sandford Fleming Pubs. If you've been wondering why it has taken this long-well, this is the U of T. The pub on November 19th went very well- everyone had a good time. It will be held every Friday as long as there is popular demand. So use it, or lose it.

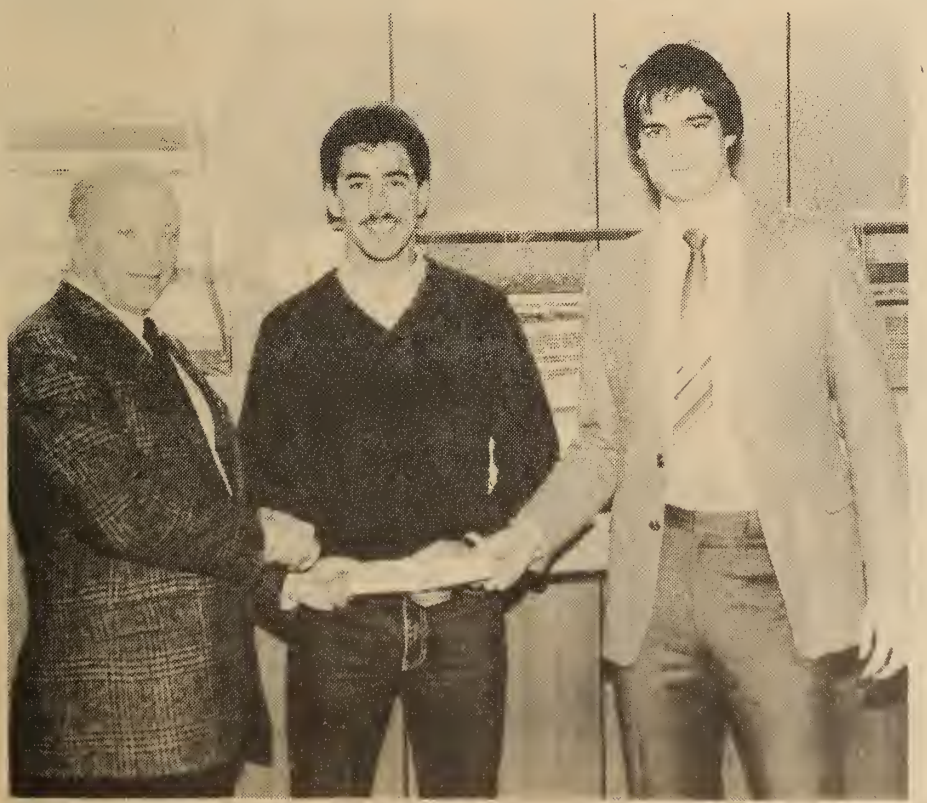
Regarding our Incidental Fees: I have been hearing from many people. If you don't like how your money is being spent, tell your class reps. If you see a possible use for your money, again, tell your class reps. This spring, the Engineering Society will say "go" or "no go" as far as continuing the payment is concerned. This will be voted on by your class reps in a Society meeting. If you do not let your feelings as a class be known, things may go the wrong way.

A comment on the status of students on this campus: Frankly, we do not seem to have any status to speak of. When we speak of improving the quality of our education we have to do it ourselves, therefore we implemented the incidental payment. When Access U of T, a group dedicated to making this campus accessible to the many handicapped students, asks Simcoe Hall to install a ramp at the Medical Sciences Building, Simcoe Hall answers that the students will have to do it themselves. If Simcoe Hall (home of this University's bureaucracy) is not in existence to provide for students, what are they there for? For themselves? Recently, you may have read the story in *The Varsity* about the $500,000 renovation job of seven offices. It seems that where there is no problem finding the money for that, it is impossible to receive $50,000 for a ramp for students. I oppose these outrageous expenditures on bureaucrats especially in times of restraint. Accomplishing anything for the students is like pulling teeth. Why does the U. of T. not have full-time pubs on campus? York, Ryerson and Humber College have them and they are being run successfully by the students. Why is it that Engineering students at the good old U of T are still using keypunches? Word has it that we are the only ones in North America using this twenty year old technology. Why did the Faculty of Applied Science and Engineering have to buy their own computer rather than receive service from the U. of T. Computing Services (UTCS)? It appears that the students are low on the list of priorities on this campus. If we want something, like high quality education, we must arrange for it ourselves. The bureaucracy exists for the bureaucracy's sake, or at least it appears that way.

I am doing my best to rectify the situation. It will not happen overnight, but it is time that we get started. This week, I will be meeting with Dr. Cohen, who is the director of UTCS. I am also working with Access U of T to see how we might be able to help win their fight.

Perhaps when the administration finishes satisfying their wants, the needs of the students will be fulfilled.

Best of luck on your exams, and Happy Holidays! May the new year be your best one yet!



Mr. Horn, Alumni Association President is seen presenting fourth year mechanical students with $100 for collecting the highest donations in the telethon.

U. of T. Students Inform Public

Acid Rain Education

Jeanette Southwood
Chem 8T5

Alarmed by the apparent failure of the American and Canadian governments to deal effectively with the acid rain problem, environmentalists from both sides of the border united this summer to travel as the Acid Rain Caravan for six weeks through forty Canadian and Northeastern U.S. towns and cities. Originally inspired by comments made by Ralph Nader during a speaking tour last year, the caravan included two members of the University of Toronto chapter of the Ontario Public Interest Research Group: Lisa Dunn, an Environmental Studies student, and Kai Millyard, a former U of T student. Canadian supporting groups included the Canadian Coalition on Acid Rain and Pollution Probe.

U.S. RESPONSIBLE FOR ½ OUR ACID RAIN

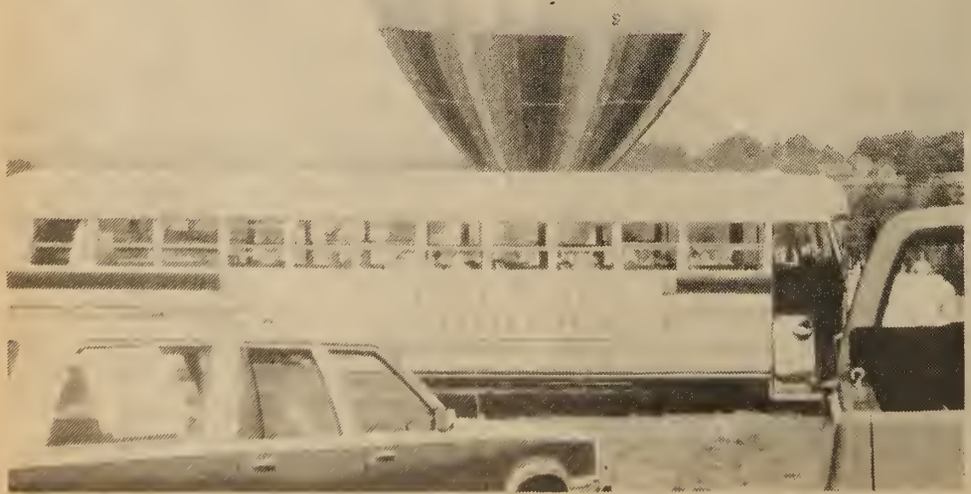
Half of the acid rain falling in Canada comes from American sources. The main reason-and political target-for the Caravan was the imminent reauthorization of the Clean Air Act in the United States Congress, at that time scheduled for July. The existing Act had too few regulations limiting acid-gas emissions but amendments had been proposed. The Canadian Coalition on Acid Rain had mounted an impressive high-powered lobbying effort in Washington and throughout the United States aimed predominantly at legislators. The primary goal of the Caravan was to complement the Coalition's and other lobbyists' awareness of the program by building public support for the acid rain amendments. The Caravan supplemented community activities and encouraged letters and calls to the politicians invlved.

Response to the Caravan was good. Dunn and Millyard found that awareness was lowest in areas less sensitive to acid rain but that, generalkly, people had at least heard of the issue. In one small town, Brimfield Massachusetts, citizens inflated a hot air baloon, allowed it to rise to the proposed smokestack height, and released balloons to demonstrate graphically the path that polluting emissions would take. But both of the U of T representatives agree that people were best-informed and most supportive in Canada.

CARAVAN EDUCATED MILLIONS

Overall, in 40 days, Caravan participants made 60 radio appearances, 50 press stories, and 30 television appearances. Th ey estimate the total numbers reached to be in the millions.

However, since the Caravan, the passage of the Clean Air Act has been delayed, allowing plans for a second Caravan. Because time was short, the 1982 route was planned through areas hardest hit by acid rain. Millyard and Dunn hope that, if carefully organized to visit key political regions, the midwest for example, and to take advantage of the 1982 experience, Caravan '83 could make an important contribution towards the passage of strong acid rain control laws in the United States and toward cleaner rain for Canada.



Acid Rain Caravan Sponsored by Environmentalists

continued from page 7

on campus, was deemed "most unlikely ever to reture". This award acknowledged his past and continuing service to the Faculty as mentor, curator, historian and 'wordsman' — and he, in response, demonstrated the latter attribute.

The just-recently-retired Faculty Secretary and Assistant Dean, James A. Gow, was then honoured by the three groups most closely associated with his long service: the alumni, the students and the Faculty. Jim Gow (Civil 4T6) became a junior instructor at Ajax in 1947, Assistant Faculty Secretary in 1952, Secretary 1962 and Assistant Dean in 1064.

James T. Horn (Chemical 4T9), President of the Engineering Alumni Association, brough grateful thanks from the alumni, the encouraging philosophy that "as one door closes, another one opens", and a gift uniquely appropriate for an avid collector of old books — a replica edition of the original (1768) three-volume set of Encyclopedia Britannica, complete with handsome University of Toronto bookends.

Wayne Levin (Industrial 8T3), President of the U of T Engineering Society, contrasted Mr. Gow's forty-year span on campus with a current student's concern over having to spend five years. He praised Mr. Gow for personifying to the letter the Faculty's motto *"Scite et Strenue"* — "Skilfully and Vigourously" and then, with the recipient, unveiled an impressive framed montage of six aerial views and three ground photographs showing a "record of campus changes during the academic lifetime of James A. Gow... presented... in recognition of his many years of outstanding service to the students of this Faculty... " Some sound endorsement was then provided by members of the Lady Godiva Memorial Band.

The final presenter, on behalf of the Faculty, was Dean Slemon (Electrical 4T6), who praised Jim Gow for his invaluable function as legislative "rememberer", his enviable efficiency in implementing Faculty decisions and his distinctive contributions to the welfare of students. Because his career responsibilities are now distributed among several Faculty officers, the position of Secretary and Assistant Dean will be retired, but Mr. Gow's name will live on through the staff — and alumni — funding of an entrance scholarship established in his name. As a tangible memento, there was also a Certificate of Appreciation from the hands of the Dean.

In addition to his thank-yous, Mr. Gow gave career reminiscenses which were at once informative, entertaining and heart-warming, and provided a unique glimpse into the personality of the Faculty and its workings and changes. He gratefully emphasized that there are two aspects at least which have *not* changed: the high quality of the students who enter each year, with their pool in intelligence, imagination and energy, and the Faculty's continuing prime devotion to the educational development of the undergraduates.

Jock Talk

Engineering Athletics

All of the fall sports are finished now and the Fall Intramural Awards Night will be held on Friday, December 3 in conjunction with Reznikoff's in the U.C. Refectory. Keep your eye opened for spring happenings.

MEN'S ATHLETICS

Acquatics

Men's aquatics got off to a great start this year by winning the interfaculty swimming and diving meet over last year's winners, Dentistry. Richard Dewards won all four events he entered: Crescendo relay, medley relay, 100 metres individual medley and 100 metres backstroke. Ralph Hoffman also put up an excellent showing with 3 firsts. Another first place went to Rick Potvin in the 50 metre freestyle. Peter Pieper placed 2nd in the 50 metre butterfly by only 5/100 of a second. Rounding out the team were Kent Malcolm, John Downing, Colin Doyle, Rick Johannes, Peter Miller, Mike Ogryzlo and Peter Mueller.

The Waterpolo team won its first 2 preseason games but is still looking for people interested in playing competitive waterpolo.

Football

This team did not make it to playoffs despite a strong pitch at the end of the season. Veteran quarterbackJohn Bellznlak tore a cartalige early in the season against Dentistry, and so rookie quarterback John C(?) had to do the job for the rest of the fall. DEFENCE HAD A GOOD SEASON. Many thanks to coaches R.C., Tony and Steve.

Soccer

The men's junior soccer team finished with a 3-2-1 record (W-L-T) in the regular season. They ended in 5th place in the third division, but unfortunately, only 4 teams advance to the playoffs.

An extremely competitive league put the senior team in 4th place. The semi-final game saw the SKULE team taking Erindale into overtime play because Kim Vincente stopped a penalty shot in regulation time.

Rugby

The men's rugby team showed well by making it to the finals. They lost the championship to a strong Victoria College Team.

Lacrosse

This strong Skule team gave a good showing in the play-offs but, unfortunately, was defeated by an even stronger Erindale team in the semi-finals.

Volleyball

The regular season begins in the spring and SKULE has two teams entered.

WOMEN'S ATHLETICS

Basketball

Although the team did not make it to the playoffs their last two games of the season saw them bring crushing defeats to the St. Hilda's and St. Mikes' teams. Strong Skule scorers in these games were Colette Taylor, Kathy Dumanski, Liz Pellegrini and Janet Porter.

Soccer

Final standing of this team was 5th out of 9 teams. The final game was played against Erindale who had the home field advantage for a 7:20 a.m. game. The teams played two five minute overtime periods with no score. The game was finally decided by penalty shots which Skule lost 3-2. Goalie Barb Moser-Shearer played a good game.

Football

There was a four-way tie for the second wild card. SKULE lost in their bid against Victoria College in the final and did not make it to the playoffs. The team did place 9th out of 22 teams.

Innertube Waterpolo

Innertube waterpolo ended with the SKULE team making it to the finals. In the quarterfinals the team played one of their best games of the year to defeat a strong PHE crew. Good defence by Nancy Carss was seen to be a key to this win. An easy win against Forestry (9-1) put SKULE into the championship game. In the last game, the women played a strong fight against Erindale. In the second half, SKULE rallied to trail the Hustlers by only one point but unfortunately, lost the game, 8-5.

John Voss, the Alumni Association Publicity Chairman, is seen above with E.A.A. President Kathy Dumanski presenting the Athlete of the Month Award to Richard Sewards, Eng Sci 8T3. Richard won four of the four events he entered in the Men's Interfaculty Swim Meet held in November. 'he lead his team to a solid victory over last years champions, Dentistry. Richard also plays for the men's engineering squash team and, in fact, is the E.A.A. commissioner for that sport.

SPECIAL ANNOUNCEMENT!!

SKI DAY is being sponsored by the E.A.A. on Friday January 14th (the Friday of Godiva Week). Lots of fun at Osler Bluffs! There will be an inter-faculty race at the same time and place, and also organized by the E.A.A. Tow tickets are $17 and the bus is $9. REMEMBER: Osler Bluffs is booked exclusively for us on this day so come on up for the best skiing of the season!

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